PROPOSED DEMOLITION OF HANGARS

PROJECTS 11-0098–11-0102

ENVIRONMENTAL ASSESSMENT

FAIRCHILD AIR FORCE BASE, WASHINGTON

MARCH 2012

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FINDING OF NO SIGNIFICANT IMPACT (FONSI)

ENVIRONMENTAL ASSESSMENT (EA) OF PROPOSED DEMOLITION OF HANGARS AT FAIRCHILD AIR FORCE BASE, WASHINGTON

INTRODUCTION

The 92 Air Refueling Wing has conducted an environmental assessment (EA) to document the environmental impacts associated with demolishing Hangars 1021, 1023, 1024, 1025, and 1026 on Fairchild AFB. In response to the Air Force directive to reduce facility space by 20% by 2020, Fairchild AFB has identified several opportunities for demolition to include the five hangars addressed in this EA. This proposal was documented along with a no action alternative, and alternatives considered but not carried forward due to infeasibility. The no action alternative was found to not meet the objective or the selection criteria of the purpose and need of the proposed action, but was carried forward as a requirement of NEPA. This this document incorporates by reference the Environmental Analysis of the Proposed Demolition of Hangars, Projects 11-0098–11-0102, dated 22 March 2012.

PURPOSE AND NEED FOR THE PROPOSED ACTION

The purpose of the proposed action is to comply with the USAF HQ directive known as "20/20 by 2020", which requires that AF Installations "[reduce] the physical plant by 20%..., by 2020". Fairchild AFB is working toward this goal by finding excess space that isn't economical to restore for other purposes and programming it for demolition. The Proposed Action will demolish five hangars on the airfield, leaving 18 hangars in place. The current missions at Fairchild AFB require 7 hangars, so the Proposed Action would leave 11 excess hangars on the airfield.

DESCRIPTION OF THE PROPOSED ACTION AND ALTERNATIVES

Proposed Action - The proposed action includes all work necessary to demolish five structures at Fairchild AFB and restore the site to a natural state. The proposed demolition activities would include: abating any existing hazardous materials such as asbestos or lead-based paint, demolishing the structures; removing slabs, foundations, and footings; removing and capping buried utilities; removing pavements and associated base fill material; backfilling to original grade; and restoring vegetation to prevent future erosion. The depth of excavation required would be up to 10 feet below ground surface.

No Action Alternative – Under the no action alternative, five structures that are excess to USAF mission requirements would remain in place, in a condition that makes them undesirable for use and unusable for most missions. They would continue to cost the Air Force money.

SUMMARY OF ANTICIPATED ENVIRONMENTAL IMPACTS ASSOCIATED WITH THE PROPOSED ACTION

The proposed action and the no action alternative were both considered in detail. Demolition activities would comply with conditions of a storm water pollution prevention plan, and best management practices for limiting fugitive dust and other air emissions, as well as for occupational safety and health requirements. Following the demolition phase, backfill and re-vegetation operations would prevent erosion of the site. The proposed action could be implemented with minor air emissions of short term duration. During demolition activities, solid wastes and wastes containing asbestos, lead-based paint, Polychlorinated Biphenyls (PCBs), mercury, asphalt, petroleum products, and any contaminated soils would all be stored, transported, disposed, and/or recycled properly.

Under the no action alternative, current conditions would continue. Opportunities to remove hazardous building components and investigate potentially contaminated shallow soils would not be realized, and structures that are excess to USAF mission requirements would continue to cost the Air Force money.

The long-term environmental impacts expected to occur as a result of the Proposed Action include a positive impact to drainage in the area through removal of impervious surfaces, and a negative impact to cultural resources. Any possible negative impact associated with the demolition of properties within a district eligible for nomination into the National Register of Historic Places will be mitigated to insignificance pursuant to a Memorandum of Agreement with the State Historic Preservation Office. No other long-term environmental impacts are expected from the Proposed Action. No long-term impacts are expected from the No Action alternative. No cumulative environmental impacts are expected from either the Proposed Action or the No Action alternatives.

PUBLIC REVIEW AND INTERAGENCY AND INTERGOVERNMENTAL COORDINATION

The Interagency and Intergovernmental Coordination for Environmental Planning (IICEP) as well and the public review process on the draft EA were conducted from July 27 to August 26, 2012.

FINDING OF NO SIGNIFICANT IMPACT

I conclude that the environmental effects of the proposed installation development at Fairchild AFB are not significant, that preparation of an environmental impact statement is unnecessary, and that a finding of no significant impact is appropriate. The preparation of the EA is in accordance with NEPA, the regulations of the Council on Environmental Quality, and Title 32, Code of Federal Regulations Part 989, as amended.

13 SEP 2012

RONALD R. DANIELS
Executive Secretary, ESHOC
Deputy Commander, 92d Civil Engineering Squadron

Date

Attachment: Environmental Assessment

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EXECUTIVE SUMMARY

Purpose and Need

The purpose of the proposed action is to comply with the USAF HQ directive known as "20/20 by 2020", which requires that AF Installations "[reduce] the physical plant by 20%..., by 2020". Fairchild AFB is working toward this goal by finding excess space that isn't economical to restore for other purposes and programming it for demolition. The Proposed Action will demolish five hangars on the airfield, leaving 18 hangars in place. The current missions at Fairchild AFB are authorized 7 hangars, so the Proposed Action would demolish five and leave 11 excess hangars on the airfield for future phases of demolition.

Scope of the Environmental Review

This Environmental Assessment has been prepared by the United States Air Force in accordance with the requirements of the National Environmental Policy Act of 1969, (42 United States Code [USC] 4321-4347), Council on Environmental Quality Regulations for Implementing the Procedural Provisions of NEPA (40 Code of Federal Regulations [CFR] §§ 1500-1508), and 32 CFR Part 989, *et seq.*, *Environmental Impact Analysis Process* (formerly known as Air Force Instruction 32-7061). The Environmental Assessment will address air quality, water resources, geological resources, cultural resources, noise, infrastructure and utilities, and hazardous waste and materials. Short term and long term impacts will be assessed, as well as the cumulative impact of the Proposed Action and its alternatives with other actions in the past, present, and reasonably foreseeable future.

Selection Criteria

The action to be taken should:

- Continue to support Fairchild AFB's missions
- Contribute to the accomplishment of the Air Force's initiatives to decrease its space and energy use
- Be compliant with current land use zoning (Industrial)
- Not violate any provisions of the National Historic Preservation Act
- Ensure compliance with current life, health, and safety requirements

Description of Proposed Action and Alternatives

Proposed Action - The proposed action includes all work necessary to demolish five structures at Fairchild AFB and restore the site to a natural state. The proposed demolition activities would include: abating any existing hazardous materials such as asbestos or lead-based paint, demolishing the structures; removing slabs, foundations, and footings; removing and capping buried utilities; removing pavements and associated base fill material; backfilling to original grade; and restoring vegetation to prevent future erosion. The depth of excavation required would be up to 10 feet below ground surface.

No Action Alternative – Under the no action alternative, five structures that are excess to USAF mission requirements would continue to cost the Air Force money. The no action alternative does not meet the selection criteria for the stated purpose and need for action, but has been carried forward as a requirement of the National Environmental Policy Act.

Results of the Environmental Assessment

The proposed action and the no action alternative were both considered in detail. Demolition activities would comply with conditions of a storm water pollution prevention plan, and best management practices for limiting fugitive dust and other air emissions, as well as for occupational safety and health requirements. Following the demolition phase, backfill and re-vegetation operations would prevent

erosion of the site. The proposed action could be implemented with minor air emissions of short term duration. During demolition activities, solid wastes and wastes containing asbestos, lead-based paint, polychlorinated biphenyls (PCBs), mercury, asphalt, petroleum products, and any contaminated soils would all be stored, transported, disposed, and/or recycled properly.

Under the no action alternative, current conditions would continue. Opportunities to remove hazardous building components and investigate potentially contaminated shallow soils would not be realized, and structures that are excess to USAF mission requirements would continue to cost the Air Force money.

A long-term environmental impact to cultural resources is expected to occur as a result of the Proposed Action. The demolition of properties within a district eligible for nomination into the *National Register of Historic Places* would be mitigated according to a Memorandum of Agreement with the State Historic Preservation Office. No other long-term environmental impacts are expected from the Proposed Action. No long-term impacts are expected from the No Action alternative. No cumulative environmental impacts are expected from either the Proposed Action or the No Action alternatives.

COMPARISON OF ALTERNATIVES

Issue	Proposed Action	No Action
Air Quality	Temporary demolition-related emissions. Asbestos abatement would be performed wherever indicated. No long term impact	No impact
Water Resources	Short term negative impacts mitigated by SWPPP. Possibility of encountering TCE-contaminated groundwater. Positive long term impact to drainage.	No impact
Geological Resources	No impact	No impact
Cultural Resources	Adverse effect to Historic District; mitigation to take place according to MOA with the SHPO	No impact
Noise	Short term insignificant increase in noise in the project area No long term impact	No impact
Infrastructure/Utilities	Short term outages possible, with at least 7 days advanced warning No long term impact	No impact
Hazardous Materials/ Waste Management	No significant impact	Opportunity to remove hazardous building components foregone

ACRONYMS AND ABBREVIATIONS

AAQS	Ambient Air Quality Standards
ACM	Asbestos-Containing Materials
AFI	Air Force Instruction
AFB	Air Force Base
AT/FP	Anti-Terrorism/Force Protection
BDS	Base Design Standards
bgs	below ground surface
CAA	Clean Air Act
CEQ	Council on Environmental Quality
CERCLA	Comprehensive Environmental Response Compensation & Liability Act
CFR	Code of Federal Regulations
CO	Carbon Monoxide
CWA	Clean Water Act
dB	decibel
DoD	Department of Defense
DLA	Defense Logistics Agency
EA	Environmental Assessment
EIAP	Environmental Impact Analysis Process
EIS	Environmental Impact Statement
EO	Executive Order
EOD	Explosive Ordnance Disposal
ERP	Environmental Restoration Program
ESA	Endangered Species Act
EWNII	Eastern WA North ID
FAFB	Fairchild AFB
HQ	Headquarters
Hz	Hertz
MCL	Maximum Contaminant Level
MOA	Memorandum of Agreement
MSA	Munitions Storage Area
MTCA	Model Toxics Control Act
NAAQS	National Ambient Air Quality Standards
NEPA	National Environmental Policy Act
NHPA	National Historic Preservation Office
NPDES	National Pollutant Discharge Elimination System
NRHP	National Register of Historic Places
OSHA	Occupational Safety & Health Administration
PCB	polychlorinated biphenyl
PM	Particulate Matter
ppm	parts per million
PWS	Performance-Based Work Statement
RCRA	Resource Conservation & Recovery Act
Q-D	Quantity-Distance
ROI	Region of Influence
RQF	Rescue Flight
SERE	Survive Evade Resist Escape
SF	Square Feet
SHPO	State Historic Preservation Office
SIP	State Implementation Plans
SRCAA	Spokane Regional Clean Air Agency
SRM	Sustainment, Restoration & Modernization
SWPPP	Storm Water Pollution Prevention Plan
SY	Square Yards
TCE	trichloroethylene
TRS	Training Squadron
TSCA	Toxic Substance Control Act
USC	United States Code
USAF	US Air Force
USDA	US Department of Agriculture
USEPA	US Environmental Protection Agency
VOC	Volatile Organic Compounds
WAARNG	Washington Army National Guard

TABLE OF CONTENTS

1.0 PURPOSE AND NEED

1.1 INTRODUCTION AND BACKGROUND

The Proposed Action is the demolition of Hangars 1021, 1023, 1024, 1025, and 1026, and surrounding pavements. Fairchild Air Force Base (FAFB) has 23 hangars on its flight line, many of which are excess to the current needs of the missions at FAFB. Currently, these hangars are in use by the 92d Maintenance Group, the 141st Maintenance Group, the 36th Rescue Flight (36 RQF), and the Washington Army National Guard (WAARNG). Hangars 1021 and 1025 currently house the Dash 21 mission, as well as housing storage. The other three hangars, 1023, 1024, and 1025, are used for storage. If this proposed action were to occur, storage would be consolidated and moved to another hangar or warehouse. Dash 21 would move to Hangar 1009, which is currently vacant.

In accordance with the National Environmental Policy Act (NEPA) of 1969 (42 United States Code [USC] 4321-4347), Council on Environmental Quality (CEQ) Regulations for Implementing the Procedural Provisions of NEPA (40 Code of Federal Regulations [CFR] §§ 1500-1508), and 32 CFR Part 989, *et seq.*, Environmental Impact Analysis Process (EIAP) (formerly known as Air Force Instruction [AFI] 32-7061), this Environmental Assessment (EA) will determine whether the proposed alternatives would result in any significant environmental, direct, indirect, or cumulative impacts. It will recommend one alternative based on environmental considerations. If impacts are predicted, mitigation will be prescribed to reduce impacts below the level of significance or recommend the preparation of an Environmental Impact Statement (EIS) to address unmitigated impacts or abandon the proposed action. This EA would also be used to guide the implementation of the proposed action consistent with laws, regulations, and U. S. Air Force standards for environmental stewardship.

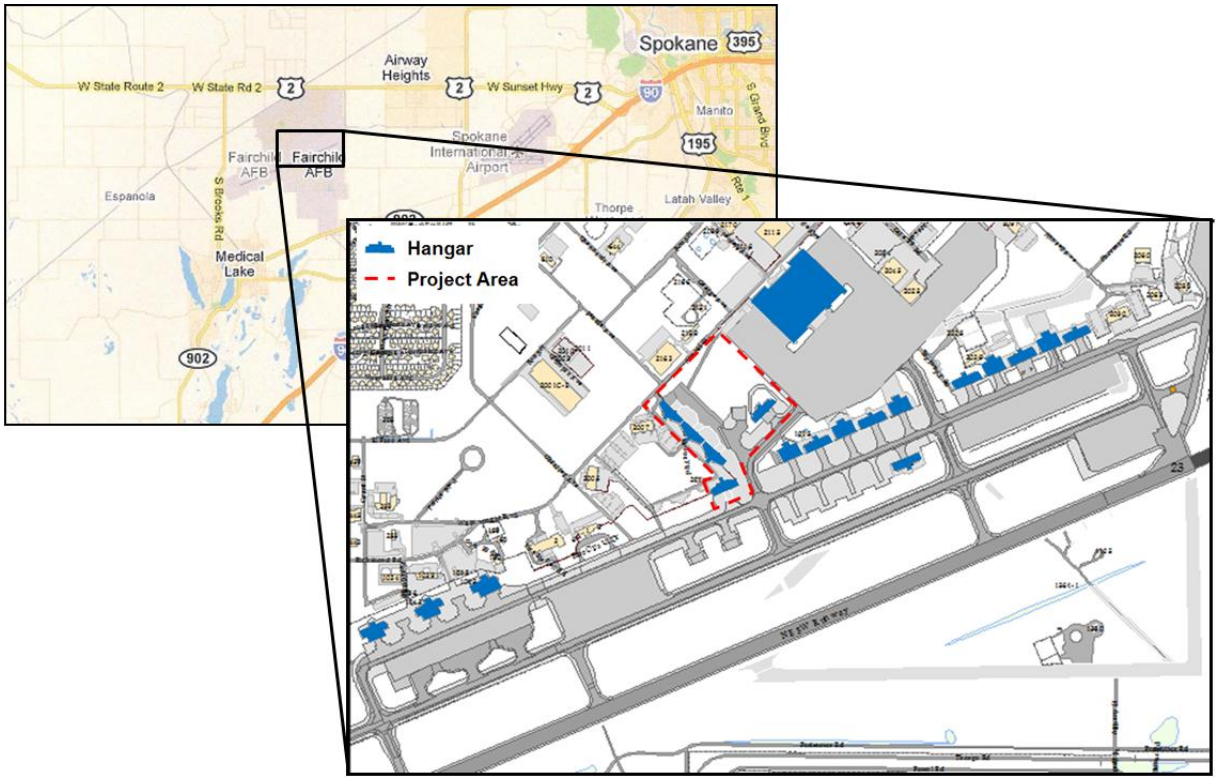

Figure 1-1. Location of Project Area

Section 1.2 provides background information that briefly describes Fairchild AFB. The purpose and need for the Proposed Action are described in Section 1.3. A detailed description of the Proposed Alternatives is provided in Chapter 2.0. Chapter 3.0 describes the existing conditions of various environmental resources that could be affected if the proposal were implemented. Chapter 4.0 describes how those resources would be affected by implementation of the Proposed Alternatives. Chapter 5.0 addresses the cumulative effects of the Proposed Alternatives, as well as other recent, past, current, and future action that may be implemented in the Region of Influence (ROI) for the Proposed Actions.

1.2 PURPOSE AND NEED OF THE PROPOSED ACTION

Fairchild AFB is working to execute the USAF HQ command directive known as "20/20 by 2020", which states that the AF will "offset the 20% reduction in funds available for installation support activities by achieving efficiencies and reducing by 20% the AF physical plant that requires funds, by 2020" (Air Force Demolition Policy 2009). This is driving Fairchild AFB to look hard at its facilities and determine which are in excess of the needs of the missions of FAFB, as well as those facilities which may be the most economical to demolish. The flightline of FAFB presents a large opportunity for right-sizing. AFI 32-1084,

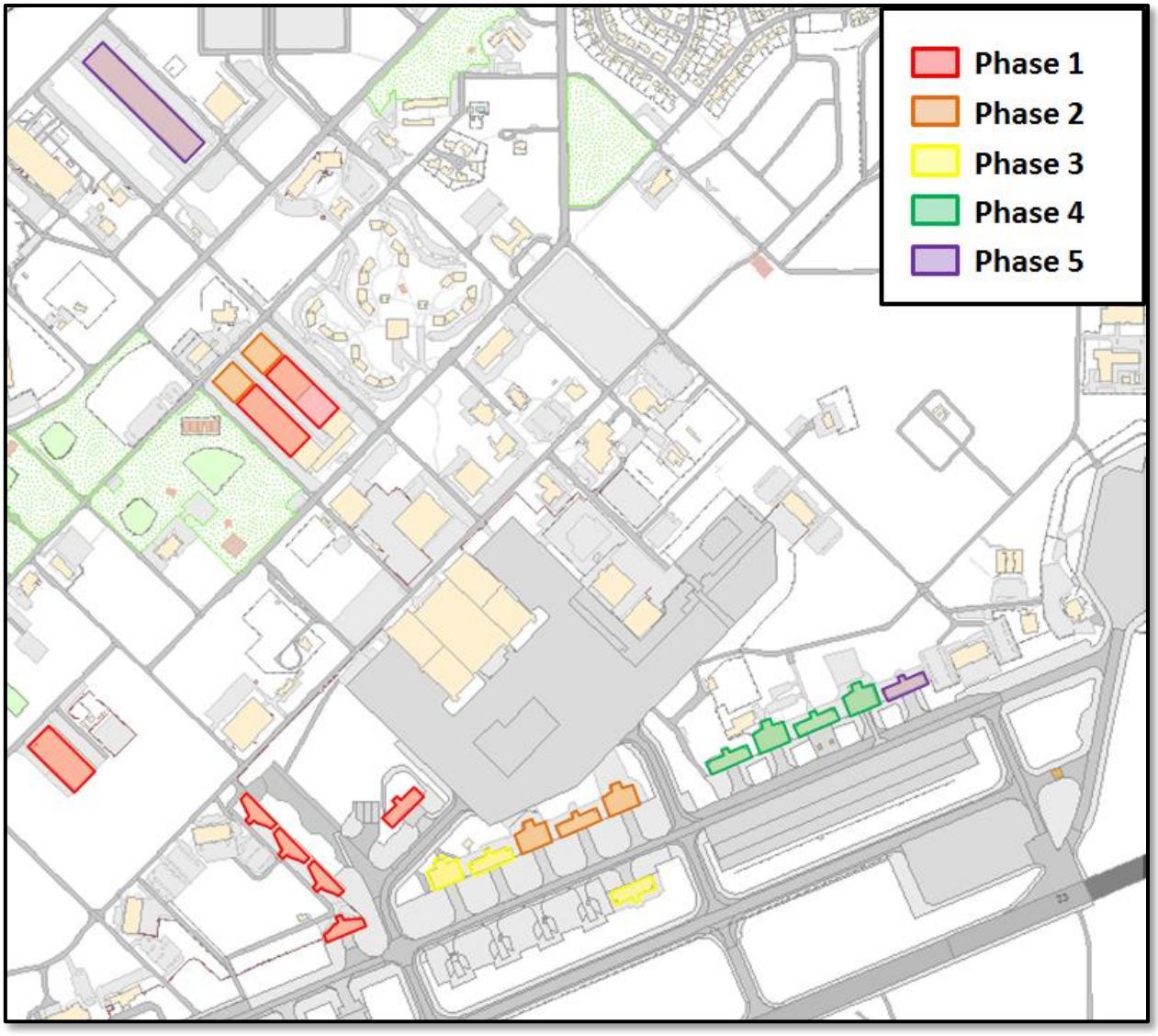

Figure 1.2 Long Range Demolition Vision

Facility Requirements, authorizes hangars based on the number of aircraft stationed at a location. Based on these calculations, and including other flying missions for the 36 RQF and the WAARNG, Fairchild AFB is authorized to have 7 hangars. Since FAFB has 23 hangars on its airfield, 16 of these hangars are officially excess to flying mission requirements. Some of these have been temporarily converted into warehouse storage.

When comparing the current flightline facilities on Fairchild AFB that are excess to current mission requirements, it is apparent that FAFB has the opportunity to demolish a number of the hangars on the flightline in order to reach the AF goal to reduce 20% of facility space by 2020. Other facilities that are on the demolition plan for FAFB include warehouse buildings that were built across the base during WWII. Figure 1.2 shows the planned demolition of warehouses until 2020, and where the hangar demolition would fit in.

The reason these five hangars were chosen to be Phase 1 of demolition is threefold. First, of all the hangars on the flightline, these are in the worst condition. Second, they are all nose docks, while other hangars on the flightline are full hangars that can completely cover aircraft. As such, they are less useful to the missions of FAFB. Third, the pavements leading up to the hangars are in poor condition and constitute a FOD hazard for any aircraft that would otherwise be able to use the hangars in question.

1.3 SCOPE OF THE ENVIRONMENTAL REVIEW AND ANTICIPATED ENVIRONMENTAL ISSUES

The scope of this environmental review is to analyze environmental concerns related to demolishing five hangars and surrounding pavements at Fairchild AFB as well as the No Action Alternative.

During demolition activities, solid and/or hazardous wastes (such as asbestos, lead-based paint (LBP), concrete and/or asphalt) would be generated and would require proper management and coordination with regulatory agencies. Inadvertent wastes could be generated if an accidental spill of fuel, lubricants, or demolition-related chemicals were to occur. There is a potential for storm water runoff generation, which would be managed on-site. Contaminated ground-water and or soils could be encountered during the demolition project. Temporary, intermittent air emissions commonly associated with construction/demolition sites are expected to occur.

During demolition activities, soil would be disturbed to remove and backfill behind the existing slabs, foundations, footings, exterior concrete and asphalt surfaces, and buried utilities. Each of the five hangars to be demolished is considered a different project, and cubic yardage of soil to be disturbed would be considered on a per-project basis. Each site to be demolished would require a storm-water pollution prevention plan (SWPPP). Because of the historical industrial usage of the hangars, contamination of shallow soil is known to exist beneath or adjacent to the structures undergoing demolition and utility removal.

No threatened or endangered species or their habitats are known to occur in or around the project area. All of the existing buildings occur in an industrial part of the base which has already been heavily disturbed due to past construction activities.

The buildings proposed for demolition are associated with a historic district that is eligible to be listed on the National Register of Historic Places (NHRP).

The issues that have been identified for detailed consideration and are therefore presented in Sections 3 and 4 are: air quality, water resources, geological resources, cultural resources (defined as archaeological, architectural, or traditional cultural properties), noise, infrastructure and utilities, safety and occupational health, and hazardous material and solid wastes. Environmental effects of the proposed action and the no action alternative were considered in detail.

1.4 SUMMARY OF KEY ENVIRONMENTAL COMPLIANCE REQUIREMENTS

National Environmental Policy Act (NEPA) of 1969 (Public Law 91-190), as amended

NEPA requires all Federal agencies to use a systematic, interdisciplinary approach in decision making which may have an impact on man's environment. Therefore, NEPA directs agencies to assess expected environmental impacts of all Federal actions and proposals. In turn, this data must be considered in the decision making process. Compliance with NEPA is accomplished through the guidance outlined in 32 CFR 989, Environmental Impact Analysis Process (EIAP).

Other Environmental Statutes and Regulations

To comply with NEPA, this analysis considers other relevant environmental statutes and regulations. According to the Council on Environmental Quality regulations, requirements of NEPA must be integrated "with other planning and environmental review procedures required by law or by agency so that all such procedures run concurrently rather than consecutively." Applicable state and federal environmental laws and regulations are:

- Clean Air Act (CAA) (42 USC §§ 7401–7671, as amended)
- Clean Water Act (CWA) of 1977 (33 USC § 1251 *et seq*.)
- Pollution Prevention Act of 1990
- National Historic Preservation Act (NHPA) of 1966 (16 USC § 470)
- Endangered Species Act (ESA) of 1973 (16 USC §§ 1531–1544, as amended)
- Archaeological Resources Protection Act
- Comprehensive Environmental Response Compensation and Liability Act (CERCLA)(40 CFR 302)
- Resource Conservation and Recovery Act (RCRA)
- Toxic Substances Control Act (TSCA) of 1970
- Occupational Safety and Health Administration (OSHA) regulations
- Executive Order (EO) 11988 (Floodplain Management)
- EO 11990 (Protection of Wetlands)
- EO 12898 (Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations)

2.0 DESCRIPTION OF PROPOSED ACTION AND ALTERNATIVES

This section describes selection criteria, the proposed action, and the no action alternative.

2.1 SELECTION CRITERIA

As discussed in Sections 1.1 and 1.2, the structures that are proposed for demolition are excess to the USAF mission requirements. All five hangars have existing fire code deficiencies relative to aircraft maintenance and would require substantial facility improvements to bring them up to current standards.

Due to these considerations, the following selection criteria were established. The action to be taken should:

- Continue to support Fairchild AFB's missions
- Enable advancement of Air Force's initiatives to decrease space, energy use, and save money
- Be compliant with current land use zoning (Industrial)
- Not violate any provisions of the National Historic Preservation Act
- Ensure compliance with current life, health, and safety requirements

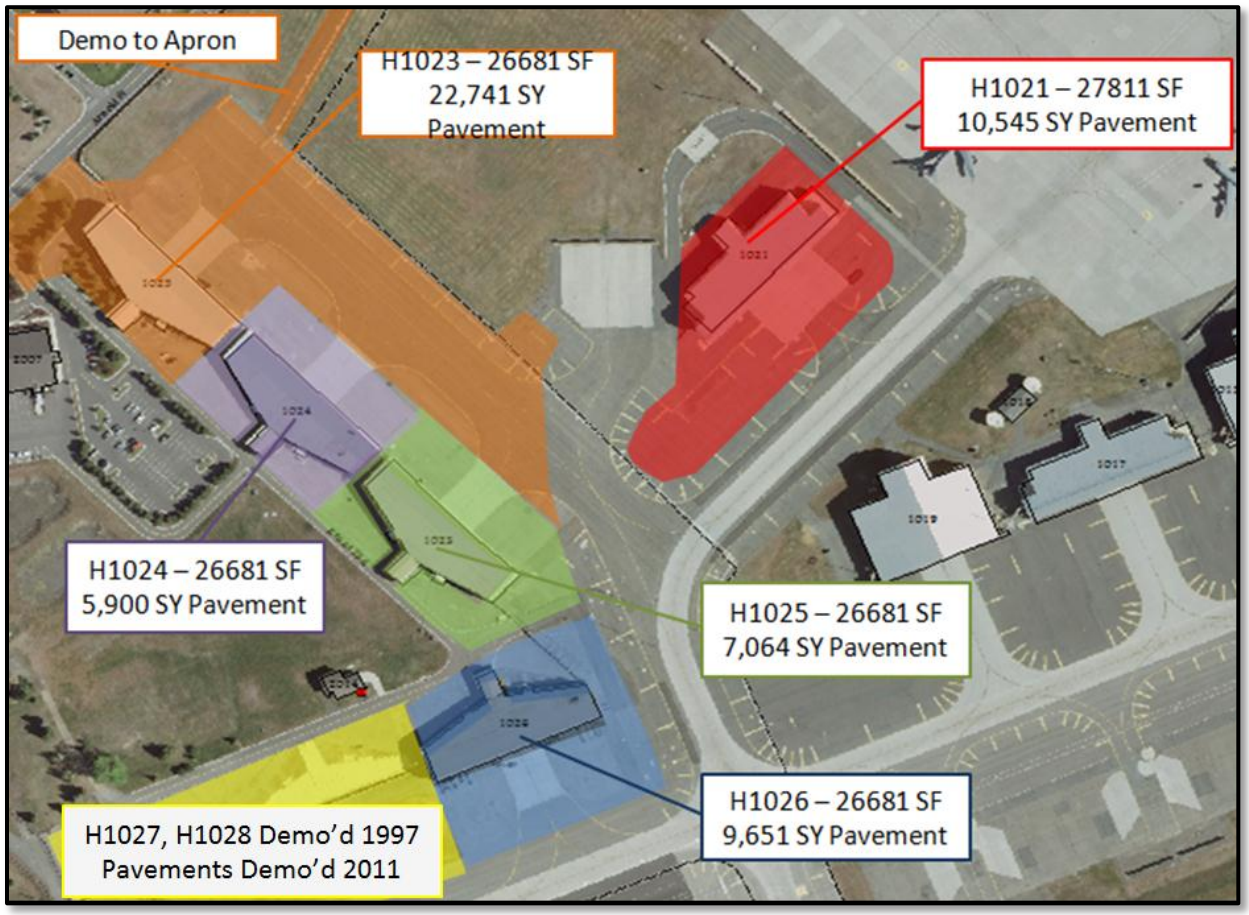

Figure 2-1. Proposed Demolition of Hangars and Pavements

2.2 PROPOSED ACTION: DEMOLISH FIVE HANGARS

The Proposed Action would demolish five of the 23 hangars on the airfield of Fairchild AFB. Hangars 1021, 1023, 1024, 1025, and 1026, and surrounding pavements, would be demolished, as shown in Figure 2.1. The total facility area demolished would be 134,535 square feet (SF). The total area of pavement to be demolished would be 55,901 square yards (SY).The proposed project area, hereafter referred to as the project area, is located generally between Arnold Street and Taxilane J on the north and south, and between the parking apron and Kenney Road on the east and west, within Fairchild AFB's flightline, as shown in Figure 1.1. The proposed demolition activities would include: abating any existing hazardous materials such as asbestos or lead-based paint, demolishing the structures; removing slabs, foundations, and footings; removing and capping buried utilities; backfilling to original grade; and restoring vegetation to prevent future erosion. The depth of excavation required would be up to 10 feet below ground surface (bgs).

The environmental impacts of the proposed action are summarized in Section 4.9 of this document, and are discussed at greater length throughout Section 4 of this document.

2.3 NO ACTION ALTERNATIVE

The No Action Alternative does not meet the second selection criterion. This alternative would leave old and inadequate hangars occupying the center of the FAFB flightline and would not support the Air Force vision to reduce infrastructure. Under the No Action Alternative, the five hangars would continue to exist on the flightline, where they would be unusable for their intended purpose and excess to mission requirements. They would remain part of the Historic District on the flightline, eligible for the *National Register of Historic Places.* The environmental impacts of the no action alternative are summarized in Section 4.9 of this document, and are discussed at greater length throughout Section 4 of this document.

2.4 ALTERNATIVES CONSIDERED BUT NOT CARRIED FORWARD

Alternatives to the Proposed Action have been considered, but it has been determined that they do not meet the purpose and need of the proposed action, as elaborated in the selection criteria.

One alternative action would be to re-purpose the flightline facilities now proposed for demolition. However, non-flying missions would not fit in with the land use or the infrastructure of the five hangars in question. The re-purposing of these hangars would not meet the second selection criteria; it would not meet the Air Force 20/20 by 2020 directive.

A second alternative considered was to "pickle" the hangars, or in other words to put them into hibernation, locked up with no heating or power. This alternative would avoid demolition costs, but it would not meet the Air Force 20/20 by 2020 directive, it would cause a problem with a Bird-Aircraft Strike Hazard (BASH) when birds would form nests in the empty hangars, and it would not earn Sustainment, Restoration, and Modernization (SRM) money for its maintenance. Additionally, the structures would need to be maintained to a level that adheres to the Secretary of Interior's Standards for Treatment of Historic Properties.

A third alternative considered would be to demolish other facilities instead of the five hangars proposed in this EA. In general, the demolition of facilities other than those in the Proposed Action would meet the selection criteria and fulfill the first objective, which is to reduce the facility footprint on Fairchild AFB. However, Figure 1.2 shows that other facilities are being considered for demolition outside of the airfield, and within the airfield more demolition is being considered. For the purpose of this EA, the first planned phase of demolition of hangars will be examined for environmental impacts.

3.0 AFFECTED ENVIRONMENT

3.1 AIR QUALITY

3.1.1 Definition of Resource

Federal Air Quality Standards

Air quality is determined by the type and concentration of pollutants in the atmosphere, the size and topography of the air basin, and local and regional meteorological influences. The significance of a pollutant concentration in a region or geographical area is determined by comparing it to federal and/or state ambient air quality standards (AAQS). Under the authority of the CAA, the U.S. Environmental Protection Agency (EPA) has established nationwide air quality standards to protect public health and welfare, with an adequate margin of safety. These federal standards, known as the NAAQS, represent the maximum allowable atmospheric concentrations and were developed for seven "criteria" pollutants: O_3, NO_2, CO, SO_2, particulate matter less than or equal to 10 microns in diameter (PM_{10}), particulate matter less than or equal to 2.5 microns in diameter ($PM_{2.5}$), and lead (Pb). Because volatile organic compounds (VOCs) and nitrogen oxides (NO_x) are precursors to the formation of O_3 in the atmosphere, control of these pollutants is the primary method of reducing O_3 concentrations in the atmosphere. Areas that meet the NAAQS for a criteria pollutant are designated as being in attainment; areas not meeting NAAQS are designated as nonattainment areas for specified pollutants.

State Air Quality Standards

Under the CAA, state and local agencies may establish AAQS and regulations of their own, provided that these are at least as stringent as the federal requirements.

General Conformity

CAA Section 176(c), General Conformity, established certain statutory requirements for federal agencies with proposed federal activities to demonstrate conformity of the proposed activities with each state's Implementation Plan (SIP) for attainment of the NAAQS. Federal activities must not:

(a) cause or contribute to any new violation;
(b) increase the frequency or severity of any existing violation; or
(c) delay timely attainment of any standard, interim emission reductions, or milestones in conformity to a SIP's purpose of eliminating or reducing the severity and number of NAAQS violations or achieving attainment of NAAQS.

General conformity applies only to nonattainment and maintenance areas.

3.1.2 Affected Environment

Of the six criteria pollutants identified by the EPA, two are of concern in Spokane County, specifically carbon monoxide (CO) and particulate matter (PM). Motor vehicles are the largest contributors to CO, with the highest concentrations occurring during the winter months. PM comes from a variety of sources including dust from unpaved and paved roadways, construction activities, gas and diesel engines, farming activities, and indoor/outdoor burning.

Spokane County is within the Eastern Washington-Northern Idaho Interstate (EWNII) Air Quality Control Region. Spokane County is classified as being in attainment with all criteria pollutants (USEPA 2004b).

CO and PM Attainment Plans rely on control strategies for tracking vehicle miles traveled; vehicle emissions inspection and maintenance programs; oxygenated fuels; transportation conformity; control measures for residential wood combustion and control strategies for windblown dust.

The Spokane Regional Clean Air Agency (SRCAA) works with Fairchild AFB in monitoring and implementing the installation's stationary source permits and emissions inventory. Since Fairchild AFB lies outside of the attainment areas in Spokane County, emissions from mobile sources are not tracked on Fairchild AFB. Fairchild AFB is classified as a synthetic minor pollution source and has voluntary limits on air emissions. There are various stationary combustion sources at Fairchild AFB, mostly from boilers and generators; volatile sources from organic liquids, and miscellaneous particulate sources from abrasive blasting, woodworking equipment, and a dust collection system designed to capture emissions from a firing range.

Regional wind patterns generally transport air pollutants eastward from Fairchild AFB toward the Spokane Valley. Winter months have the highest incidences of degraded air quality due to wood burning stoves and vehicular emissions. These emissions are exacerbated by temperature inversions (stagnant air reduces air quality), and valley topography.

3.2 WATER RESOURCES

3.2.1 Definition of Resource

Water resources include both surface water and groundwater. Surface water includes the lakes, rivers, streams, and wetlands within a watershed. Groundwater includes aquifers. The Clean Water Act (CWA) is the primary federal law that protects the waters of the United States. Since 1972, amendments to the CWA and subsequent regulations have been developed to meet the objectives of maintaining and restoring the integrity of those water bodies. The National Pollutant Discharge Elimination System (NPDES) permit program establishes federal limits on discharge of pollutants to surface waters.

The Region of Influence (ROI) includes the project area. The project area contains buried storm water drains which empty into collection/evaporation ponds, and these are also considered part of the Region of Influence for water resources.

3.2.2 Affected Environment

Wetlands

The proposed project area is located generally between Arnold Street and Taxilane J on the north and south, and between the parking apron and Kenney Road on the east and west, within Fairchild AFB's flightline. There are no wetlands in or surrounding the project area.

Storm Water

The land surrounding the five hangars is improved, and storm water runoff is conveyed quickly by overland flow to storm drains. The storm drains from the project area carries storm water to flightline storm water retention ponds located just south of the 05 end of the runway.

Groundwater

The groundwater beneath Fairchild AFB consists of variable, shallow, unconfined aquifers overlying deeper aquifers confined by basalt bedrock layers. Depth of shallow groundwater depends on a highly complex and variable stratigraphy of glacial flood deposits overlying bedrock. Seasonal water tables may be at the surface in years of high precipitation and average depth to the water table is about 5 - 20 feet. Several Environmental Restoration Program Sites have been identified as having concentrations of Trichloroethylene above the Federal Maximum Contaminant Level (MCL) in groundwater. The project area is located directly above restoration site SS-39, which consists of a TCE plume on FAFB (Figure 3.1). There are also 13 monitoring wells within the project area, which are discussed in Sections 3.6 and 4.6 of this EA.

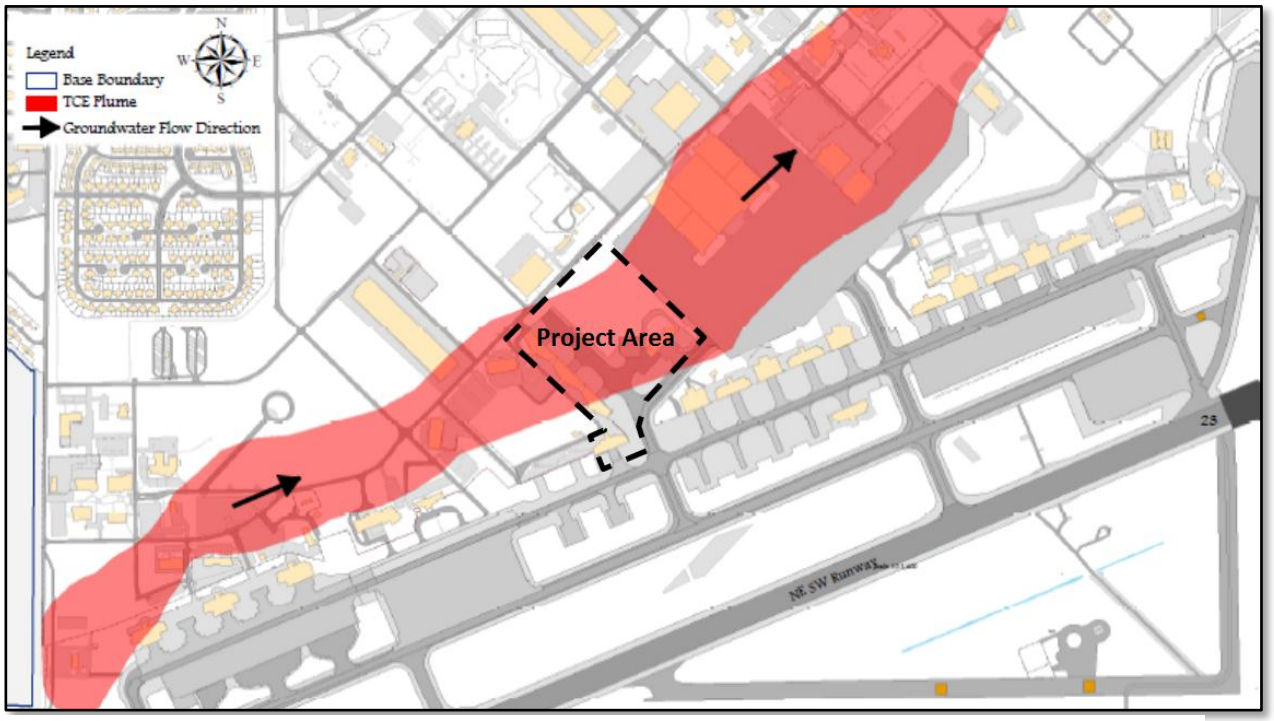

Figure 3.1. TCE Plume Map

Surface Water

Fairchild AFB is located at the hydrologic head of three watershed basins, the Lower Spokane River, Hangman Creek, and the Palouse River. There are several open drainage ditches, storm water detention ponds/swales, and numerous isolated wetlands. The topography is nearly flat to undulating with no indication that surface runoff is conveyed by surface flow to stream channels within the Base boundary. The primary function of surface water features on the Base is temporary containment of storm water and groundwater recharge.

3.3 GEOLOGICAL RESOURCES

3.3.1 Definition of Resource

Geologic resources include topography, geology, and soils. Topography refers to an area's surface features including its vertical relief. These features may have scientific, historical, economic, and recreational value. Geologic resources of an area typically consist of surface and subsurface materials

and their inherent properties. The term "soils" refers to unconsolidated materials formed from the underlying bedrock or other parent material. Soils play a critical role in both the natural and human environment. The ROI for these resources is the immediate area of the Proposed Action.

3.3.2 Affected Environment

Fairchild AFB is situated within the channeled scablands of the Columbia River Basin which has been shaped by large basalt flows, windblown soils, and the great floodwaters of the glacial ice dam break of Glacial Lake Missoula.

Topography of Fairchild AFB is flat to gently undulating with slopes rarely exceeding ten percent. The average elevation is approximately 2340 feet. Soils in the channeled scablands can be quite variable and contrasting. Typically soils consist of shallow regolith underlain by basalt bedrock with a thin layer of volcanic ash influenced loess on the surface. Deeper soils occur associated with glacial flood and melt water deposits of sand, silts, and clays. These areas can retain subterranean water ways. Remnant clayey lacustrine materials or deeply weathered basalt bedrock often perch water tables in the area.

Soils and topography within the project area have been altered by previous earthmoving and construction activities. Within the project area, USDA Natural Resource Conservation Service mapped Bong and Phoebe fine sandy loams, with 0 to 8 percent slopes (NRCS 2006). These soils are characterized as well to excessively drained soils. The capacity of the most limiting layer to transmit water is high. Runoff infiltrates rapidly into the soils in this area.

There is known shallow soil contamination associated with the following structures: Hangars 1023, 1024, 1025, and 1026. Identified soil contamination is associated with former oil-water separators previously located at these facilities. Also, based on past practices on the pavements and in the hangars, there could potentially be additional shallow soil contamination, which will be discussed in Section 3.8 and 4.8.

3.4 CULTURAL RESOURCES

3.4.1 Definition of Resource

Cultural resources are any prehistoric or historic district, site, or building, structure, or object considered important to a culture, subculture, or community for scientific, traditional, religious or other purposes. They include archaeological resources, historic architectural resources, and traditional resources. Archaeological resources are locations where prehistoric or historic activity measurably altered the earth or produced deposits of physical remains (e.g., arrowheads, bottles). Historic architectural resources include standing buildings, dams, canals, bridges, and other structures of historic or aesthetic significance. Traditional resources are associated with cultural practices and beliefs of a living community that are rooted in its history, and are important in maintaining the continuing cultural identity of the community.

Historic properties (as defined in 36 CFR 60.4) are significant archaeological, architectural, or traditional resources that are either eligible for listing, or listed in, the *National Register of Historic Places* (NRHP). Historic properties are evaluated for potential adverse impacts from an action, as are significant traditional resources identified by American Indian tribes or other groups. In 1999, the DoD promulgated its *American Indian and Alaska Native Policy*, which emphasizes the importance of respecting and consulting with tribal governments on a government-to-government basis. The policy requires an assessment, thorough consultation of the effect of proposed DoD actions that may have the

potential to significantly affect protected tribal resources, tribal rights, and Indian lands before decisions are made by the services. The ROI includes the immediate project area.

3.4.2 Affected Environment

An inventory and evaluation of facilities on Fairchild AFB was completed in 2008 to assess the potential for cultural resources of possible historical import. As a result of this inventory, the State Historic Preservation Office (SHPO) opined that Fairchild AFB's flightline comprises a Historic District, eligible for nomination to the *National Register of Historic Places* (NRHP). The district contains 24 resources built between 1943 and 1985, though most were built between 1952 and 1955. Nineteen (19) of these buildings, while not individually eligible, contribute to the district and are mostly pre-fabricated maintenance docks and hangars. The identified resources include: Buildings 1001, 1003, 1005, 1007, 1009, 1011, 1012, 1013, 1015, 1017, 1019, 1021, 1023, 1024, 1025, 1026, 1029, 1033, and 1037. The five hangars identified in the proposed action are contributing properties to this Historic District.

3.5 NOISE

3.5.1 Definition of Resource

Noise is considered to be unwanted sound that interferes with normal activities or otherwise diminishes the quality of the environment. It may be stationary or transient. Stationary sources are normally related to specific land uses (e.g., housing tracts or industrial plants). Transient noise sources move through the environment, either along relatively established paths (e.g., highways, railroads, and aircraft flight tracks around airports), or randomly. The unit used to measure the intensity of sound is the decibel (dB). Sound measurement is refined through the use of "A-weighting." The normal human ear can detect sounds that range in frequency from about 20 Hz to 15,000 Hz. However, all sounds throughout this range are not heard equally well. Therefore, through internal electronic circuitry, some sound meters are calibrated to emphasize frequencies in the 1,000 to 4,000 Hz range. The human ear is most sensitive to frequencies in this range, and sounds measured with these instruments are termed "A-weighted." Throughout this document, dB levels can be assumed to be A-weighted. The duration of a noise event, and the number of times noise events occur, are also important considerations in assessing noise impacts.

As a basis for comparison when noise levels are considered, it is useful to note that at distances of about 3 feet, noise from normal human speech ranges from 63 to 65 dB, operating kitchen appliances range from about 83 to 88 dB, and rock and roll concerts may approach 110 dB.

Day-Night Average Sound Level

The L_{dn} metric is a number that describes an average sound level for a 24-hour day, weighted for day and night. This metric sums the individual noise events and averages the resulting level over the 24-hour period. Thus, it is a composite metric which considers the maximum noise levels, the duration of the events, the number of events that occur, and the time of day during which they occur. This metric adds 10 dB to those events that occur between 10 p.m. and 7 a.m. to account for the increased intrusiveness of noise events that occur at night when ambient noise levels are normally lower than during the day time. This cumulative metric does not represent the variations in the sound level heard. Nevertheless, it does provide an excellent measure for comparing environmental noise exposures when there are multiple noise events to be considered. Its use in determining which land uses are compatible with a given noise level is endorsed by the scientific community and several governmental agencies (USEPA 1974; Federal Interagency Committee on Urban Noise 1980; Federal Interagency Committee on Noise 1992; Air Force 1999).

Finally, it should be noted that ambient background noise is not considered in the noise calculations that are presented below. There are two reasons for this. First ambient background noise, even in wilderness areas, varies widely depending on location and other conditions. For example, studies conducted in an open pine forest in the Sierra National Forest in California have measured up to a 10 dB variance in sound levels simply due to an increase in wind velocity (Harrison 1973). In general however, ambient noise levels in a typical low-density residential area can be expected to be approximately 51 dB and noise levels in a typical farm field (likely similar in noise level to Fairchild AFB) can be expected to be approximately 44 dB (USEPA 1974). In calculating noise levels, louder sounds dominate the calculations and in general, aircraft and other transportation-related noise would be expected to be the dominant noise sources characterizing the acoustic conditions in the ROI. Therefore, it is reasonable to assume that ambient background noise in the project's ROI would have little or no effect on the calculated L_{dn}.

3.5.2 Affected Environment

The project area is affected by noise as it is located close to the runway. The L_{dn} of the project area due to aircraft noise is 65-70 dB (KC-135 Noise Contour 1995). Some additional noise results from day-to-day activities associated with the operations, maintenance, and industrial functions which are part of the operation of Fairchild AFB. These noise sources include the operation of ground-support equipment and vehicular traffic. However, this noise is generally temporary and highly localized.

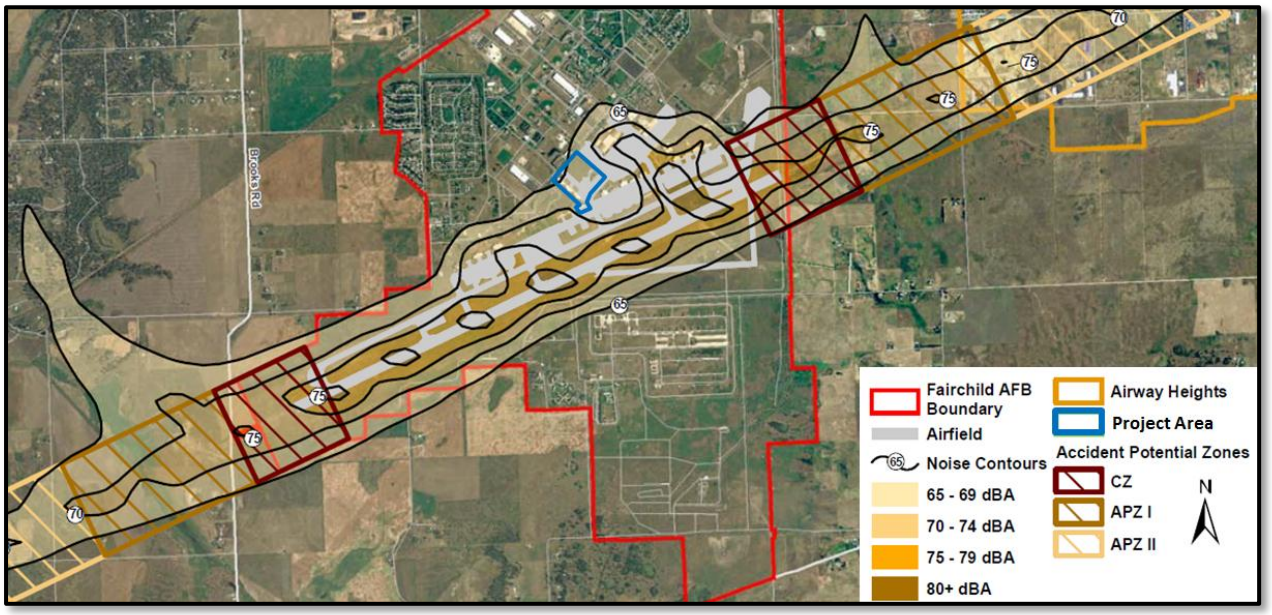

Figure 3.2. Project Area Noise Environment

3.6 INFRASTRUCTURE AND UTILITIES

3.6.1 Definition of Resource

Infrastructure consists of the systems and physical structures that enable a populace to function and to accommodate mission operations. On Fairchild AFB infrastructure includes a transportation network, utilities, communications, airfield and support buildings, water supply, sanitary systems and wastewater, administrative and maintenance buildings, and solid waste disposal.

3.6.2 Affected Environment

The infrastructure of the project area includes the hangars and pavements proposed to be demolished, pavements to remain in place, and buried utility lines consisting mainly of storm water, water, sewer, electrical, and communications lines, as shown in Figure 3.2 that will be cut, capped, and removed. There is also an abandoned fuel line running under hangars 1023, 1024, and 1025. Other infrastructure within the project area includes a buried oil-water separator, monitoring wells, and barriers, to include masonry walls and chain link fence. The Performance-Based Work Statement (PWS) specifies that chain link fence or masonry block wall is to be installed along the border of the project area that lies adjacent to the road.

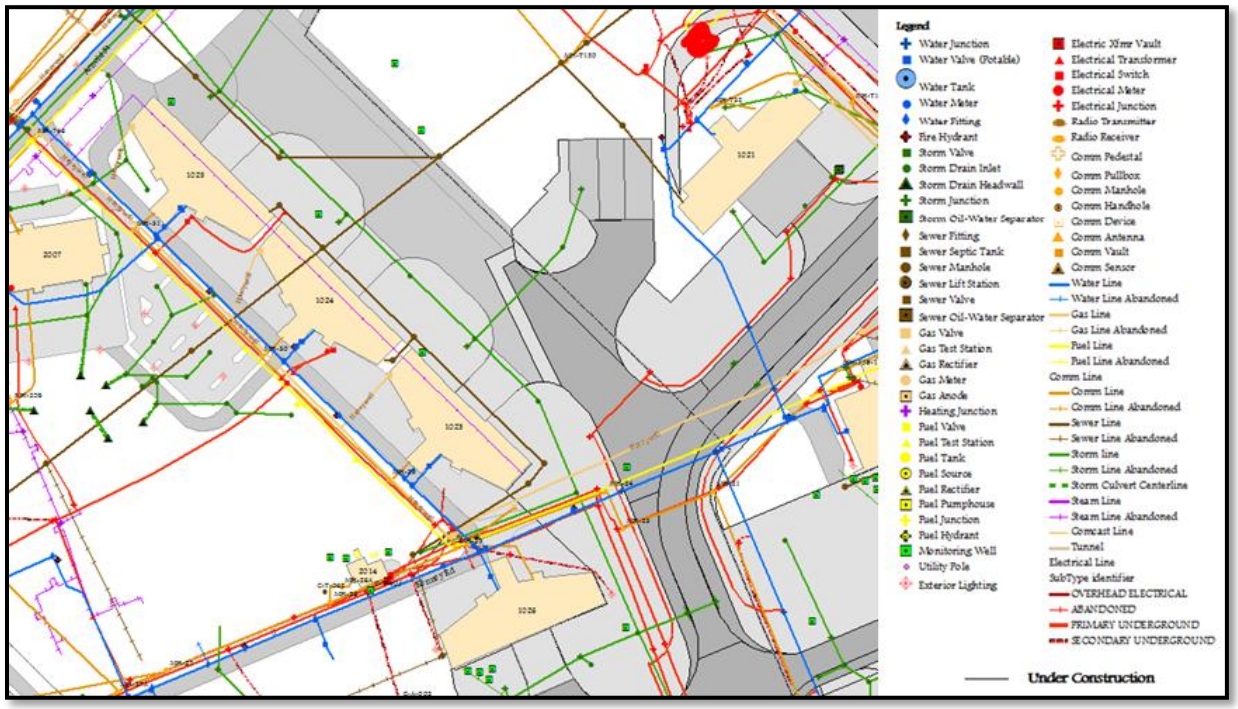

Figure 3.2. Project Area Infrastructure and Utilities

3.7 SAFETY AND OCCUPATIONAL HEALTH

3.7.1 Definition of Resource

This section addresses ground, explosive, and flight safety with regard to day-to-day operations at Fairchild AFB and construction job site safety of those providing project-related services.

3.7.2 Affected Environment

Ground Safety

Day-to-day operations and maintenance activities are performed in accordance with applicable Air Force safety regulations, published Air Force Technical Orders, and standards prescribed by Air Force Office of Safety and Health requirements.

Anti-terrorism/Force Protection

As a result of terrorist activities, the DoD and the Air Force have developed a series of Anti-Terrorism/Force Protection (AT/FP) guidelines for military installations. These guidelines address a range

of considerations that include access to the installation, access to facilities on the installation, facility siting, exterior design, interior infrastructure design, and landscaping. The intent of this siting and design guidance is to improve security, minimize fatalities, and limit damage to facilities in the event of a terrorist attack.

Explosives Safety

Safety clear zones are associated with the runway, the MSA, and the EOD area at Fairchild AFB. Permissible uses, structure heights, and construction material in these areas are prescribed to protect both the safety of the aircrews and the safety of persons and property. All ordnance is handled and stored in accordance with Air Force explosive safety directives (Air Force Manual 91-201), and all munitions maintenance is carried out by trained, qualified personnel using Air Force-approved technical procedures. Explosives safety quantity-distance (Q-D) arcs are associated with the runway, but do not extend near to the project area.

As part of the contracts for demolition services, standard terms and conditions include safety as a priority. Areas of concern include compliance with regulations typical to demolition projects, such as confined space regulations; minimum personal protection equipment standards including footwear, hardhats, and eye protection; heavy equipment operations; and limited access to hazardous areas. Two of the buildings to be demolished have been evaluated for hazardous materials, and have been found to contain lead based paint and asbestos. The other three hangars in the project area are assumed to be constructed with similar materials. Soils may contain hazardous substances, and if any are found, demolition work must stop and the contamination must be treated before continuation. The groundwater contains TCE concentrations above the Federal MCL, if encountered and dewatering of the site is necessary, will need to be treated accordingly. Appropriate and safe methods of demolition and materials handling within regulations and safety standards for these hazards must be determined from hazardous materials surveys and site conditions.

3.8 HAZARDOUS MATERIALS AND WASTE MANAGEMENT

3.8.1 Definition of Resource

This section describes the affected environment associated with solid waste management, hazardous materials and wastes, storage tanks, asbestos-containing materials (ACMs), and the ERP sites. Municipal solid waste management and compliance at Air Force installations is established in AFI 32-7042, *Solid and Hazardous Waste Compliance*. In general, AFI 32-7042 establishes the requirements for installations to have a solid waste management program to incorporate a solid waste management plan; procedures for handling, storage, collection, and disposal of solid waste; record-keeping and reporting; and pollution prevention. AFI 32-7080, *Pollution Prevention Program*, addresses source reduction, resource recovery, and recycling of solid waste.

The ROI for hazardous materials and wastes is the project area where structural and ground disturbance would occur.

3.8.2 Affected Environment

Soils covered with asphalt and/or concrete planned for removal may contain petroleum based materials from leaking equipment parked on these structures. Oils/tars may have seeped into the soil from the asphalt surfaces. There is known shallow soil contamination associated with the following structures: Hangars 1023, 1024, 1025, and 1026. Identified soil contamination is associated with former oil-water separators previously located at these facilities. Also, based on past practices on the pavements and in

the hangars, there could potentially be additional shallow soil contamination. Finally, there is a large TCE plume on FAFB, which flows in the groundwater directly under the project area, which will be discussed in Section 4.

Fairchild AFB has policies in place for reporting to regulatory agencies, safe handling and disposal of hazardous and non-hazardous solid waste for contractors. Contractors are required to complete abatement plans and to follow all AF policies and state and federal regulations pertaining to abatement, safe handling and disposal.

4.0 ENVIRONMENTAL CONSEQUENCES

4.1 AIR QUALITY

Air quality will be evaluated based on the synthetic minor permit governing Fairchild's emissions, held by SRCAA.

4.1.1 Proposed Action Impacts

The activities encompassed by Proposed Alternative do not include stationary emissions sources, and therefore do not contribute to the categories of the synthetic minor permit. Over the short term, demolition and related activities would have some minor, negative effects to air quality from fugitive dust and non-road vehicle sources. Current best management practices for construction would be carried out to mitigate these effects, to include dust control, as specified in Fairchild AFB's Performance-Based Work Statement for Demolition Services. A Notice of Intent (NOI) would be submitted to SRCAA to seek approval for the abatement and demolition of asbestos containing materials, which is required under the CAA.

Over the long term, there would be no negative impacts to air quality from the demolition of any of the proposed hangars, or their cumulative demolition.

4.2.2 No Action Impacts

Under the No Action Alternative, no short term or long term impacts would occur to affect air quality.

4.2 WATER RESOURCES

Evaluation criteria for impacts on water resources are based on water availability, water quality, and impacts to beneficial uses. Standards are established by federal and state law.

4.2.1 Proposed Action Impacts

The demolition of each of the five hangars in the proposed action could have short term negative impacts to the surrounding area, by the production of construction dust and debris, as well as silt and sediment that could be carried away in surface runoff waters into the storm sewer system. This negative impact would be mitigated by the implementation of a Storm Water Pollution Prevention Plan (SWPPP), which is required for projects greater than 1 acre in size, such as these hangar demolition projects. Other short term impacts would occur if the excavation floor slabs, footers, or utilities went deep enough to reach the groundwater table, since the groundwater in the project area is known to be contaminated with TCE. If groundwater is encountered, the Contractor would need to cease all operations in the area and immediately notify the Contracting Officer. Sampling, testing, dewatering

operations and/or treatment would be addressed as unforeseen site conditions, and if deemed necessary, would be carried out accordingly.

All Fairchild Air Force Base (FAFB) storm water activities (construction and industrial) are regulated by the Environmental Protection Agency (EPA), not the Washington Department of Ecology (WDOE). As a minimum, all construction, demolition, or other earth-disturbing activities will be managed in accordance with the requirements of the most current National Pollution Discharge Elimination System General Permit for Discharges from Construction Activities (commonly referred to as the Construction General Permit or CGP). Coverage under the CGP is required when the total project site will disturb 1 or more acres of land; or will disturb less than 1 acre but is part of a common plan of development or sale that will ultimately disturb 1 or more acres of land. This applies to the current projects, and a NOI will be submitted to the EPA accordingly.

Over the long term, the impacts would be beneficial in nature. Approximately 69,800 SY of impervious surfaces would be restored to a natural state, allowing for infiltration of storm water into groundwater. The area of demolition would be re-graded and re-vegetated to allow for drainage into the existing storm drains, and to avoid ponding.

4.2.2 No Action Impacts

The No Action alternative would have no long term positive or negative impacts to water resources.

4.3 GEOLOGICAL RESOURCES

4.3.1 Proposed Action Impacts

The short term impact of the proposed demolition projects will be to disturb the soil in the project area to a depth of 10 feet bgs, which is negligible, since the project area is already improved and disturbed to that depth. The soil will be filled in with fill material if necessary, to bring it to a grade level with the surrounding areas, and graded to provide proper drainage.

The long term impact to geological resources is also negligible, since the area has already been disturbed and is considered an improved area. Fill material will be introduced to the site, covered in topsoil, and hydroseeded.

No precious minerals or other geological resources of value or concern are expected to be found within the project area. If any are found, work will stop immediately and the contractor will report to Fairchild AFB for follow up action.

Contaminated soil is known to exist in the project area as discussed in Sections 3.3 and 3.8. Actions to mitigate the contaminated soil are discussed in Section 4.8.

4.3.2 No Action Impacts

There will be no impacts to geological resources under the No Action Alternative.

4.4 CULTURAL RESOURCES

4.4.1 Proposed Action Impacts

The proposed action will incur a direct negative impact to cultural resources. Several properties built along the flight line comprise an NRHP eligible historic district. Although contributing elements to the historic district, none of these properties are individually eligible for the NRHP. Fairchild AFB is negotiating a Memorandum of Agreement (MOA) with the Washington Department of Archeology and

Historic Preservation (SHPO) that will arrange appropriate mitigation actions for adverse effects to the properties within the eligible district in the case of modification or demolition, specifically buildings: 1001, 1003, 1005, 1007, 1009, 1011, 1012, 1013, 1015, 1017, 1019, 1021, 1023, 1024, 1025, and 1026. The five hangars to be demolished under the proposed action will not be demolished until this MOA has been signed, and mitigation actions will occur in accordance with this agreement. The mitigation within the MOA is projected to include select Historic American Building Surveys; a diorama; expanded information on a public web site; a historic video; and educational visual displays regarding the base's historical flying missions.

4.4.2 No Action Impacts

Under the No Action alternative, no impacts to cultural resources will occur.

4.5 NOISE

In this section, noise associated with proposed activities are considered and compared with current conditions to assess impacts.

4.5.1 Proposed Action Impacts

Primary noise sources during construction activity would be heavy equipment operation such as earth moving equipment, asphalt-laying equipment, and graders. Construction noise would be noticeable in the immediate vicinity of the project sites because its characteristics are quite distinct from ambient noise currently experienced in the area. The effects would be localized to the area immediately surrounding the project site. Persons exposed to this are mostly construction workers on the site. Construction workers would be required to wear hearing protection, in accordance with Occupational Safety and Health Administration (OSHA) regulations.

As described in Section 3.6 *Noise*, the project site currently experiences ambient noise of between 65 and 70 dB L_{dn}. These noise levels are compatible with the current land use in the Flightline/Industrial Land Use Zone. The long-term acoustic environment and land use compatibility in the project site would not be changed by implementation of the Proposed Action. Noise would be temporary and would be expected to be limited to normal working hours. Direct impacts to workers are mitigated by hearing protection requirements. Cumulative impacts over a short time period would be the addition of construction noise to operational, maintenance, and industrial noise in the area. Thus, construction noise would be experienced over the short term, and no significant impacts from increases in noise are expected. Over the long term there would be a minor improvement to the noise environment through the elimination of industrial activities within the project area, and its return to a natural state.

4.5.2 No Action Impacts

Under the No Action alternative, there would be no positive or negative impact to the noise environment in or around the project area. There would continue to be sparse industrial and flightline activities in and around the project area.

4.6 INFRASTRUCTURE AND UTILITIES

Effects on infrastructure are evaluated based on their potential for disruption or improvement of existing levels of service and additional needs for energy, water, sewer, wastewater, and transportation.

4.6.1 Proposed Action Impacts

Under the Proposed Action alternative, all infrastructure relating to the five hangars would be demolished and removed. Utilities in the area include gas lines, water lines, electrical lines, communications lines, and sewer lines. Storm drains are to be protected from damage during

demolition, and the surrounding area restored to the approved grade, as discussed in Section 4.2. The process to carry this out could cause short term disturbance to surrounding electrical utilities. If this is the case, prior notification will be provided by the contractor to minimize any negative impacts this might have. The contractors will also remove and dispose of an oil-water separator and remove and cap associated sewer lines. The oil-water separator would require a complete cleaning prior to removal. Its contents (water and sludge) would be sampled prior to disposal. Once sampling is complete the oil-water separator and piping would be disposed of as construction debris. If any contaminated soil is found at the site, work would immediately cease, the contacting officer would be contacted, and actions would be taken as described in Section 4.10.1 of this EA.

In the long term, the level of service of utilities in neighboring facilities would experience no impact. The level of service to transportation in the surrounding area would remain the same. The contractors would be required to install a barbed wire, chain link fence along Kinney Road, 20 feet from the edge of the road. They would install 2 gates into the fence, providing the same number of access points than currently exist.

The contractors should be made aware of the 13 monitoring wells that exist in the project area that monitor the underlying TCE plume. Currently no provision for them is made in the Performance-based Work Statement; however it is recommended that they be protected from damage or debris during demolition, and the surrounding area brought to an approved grade. The monitoring wells should sit on a mound or on level ground, so that the top of the wells do not run the risk of infiltration of surface runoff water.

No significant long-term impacts to infrastructure and utilities are expected as a result of the Proposed Action.

4.6.2 No Action Impacts

There would be no significant impacts to infrastructure and utilities as a result of the No Action alternative.

4.7 SAFETY AND OCCUPATIONAL HEALTH

Impacts to safety and occupational health are assessed according to the potential to increase or decrease of safety risks to personnel, the public, and property.

4.7.1 Proposed Action Impacts

To assess relative risk associated with this proposal, it was assumed that the industrial classifications of workers involved are the Construction Trades. Based on Department of Labor data for calendar year 2006, the probability of a fatal injury was 10.8 per year out of 100,000 employed (U.S. Department of Labor, Bureau of Labor Statistics 2008). Although DoD guidelines for assessing risk hazards would categorize the hazard category as “catastrophic” (because a fatality would be involved), the expected frequency of the occurrence would be considered “remote” (DoD 1993). Strict adherence to all applicable occupational safety requirements including the requirement for contractors to submit a site specific safety and health plan would further minimize the relatively low risk associated with these construction activities.

In the event that anticipated hazards are discovered during the project, contractual provisions are included for projects involving ground disturbance and demolition of older structures requiring contractors to cease work and report discovery of unknown, known, or suspicious hazards.

Thus, no significant impacts to project workers, the environment, employees at Fairchild AFB, or the public at large are expected under the Proposed Action

4.7.2 No Action Impacts

No change would occur in the existing work environment for either Fairchild AFB personnel or construction workers. No significant impacts to human safety are expected under the No Action alternative.

4.8 HAZARDOUS MATERIALS AND WASTE MANAGEMENT

4.8.1 Proposed Action Impacts

During the proposed demolition activities, a significant volume of demolition debris would be generated, and treated as uncontaminated trash. It is possible that equipment failure or a spill of fuel, lubricants, or demolition-related chemicals could generate solid or hazardous wastes. In such a case, or if excavated soils exhibit suspicious odors or appearance, the following procedures would apply on Fairchild AFB.

Fairchild AFB personnel have specified procedures for handling demolition-related solid and hazardous wastes within the Base Design Standard (BDS). The procedures are stated in Section 013543 of the BDS, Environmental Procedures, Fairchild Specification. The contractor will be required to submit a Solid Waste Plan, itemizing solid waste expected to be encountered during the demolition process, and include proposed disposal locations and corresponding applicable Solid Waste Permit(s) showing the disposal facility is licensed. If hazardous wastes are generated, they are required to be stored at sites operated in accordance with the requirements of 40 CFR 265. The regulations require the generator to characterize hazardous wastes with analyses or process knowledge. Hazardous wastes are eventually labeled, transported, treated, and disposed in accordance with federal and state regulations. The contractor would be responsible to remove and dispose of hazardous materials and wastes accordingly by the project completion date.

Soil Contamination due to industrial activities is known to exist near Hangars 1023, 1024, 1025, and 1026, as discussed in section 3.8. There is also a large TCE plume on FAFB, which flows in the groundwater directly under the project area. Upon encountering petroleum-contaminated soil or discolored soil, work would immediately cease, the Contracting Officer would be notified, and the following procedures would take place in accordance with the BDS Section 013543: (i) the contaminated soil would be removed, isolated from the work area, and diapered; (ii) the contaminated soil would sampled and analyzed to determine the degree of contamination; (iii) soil with sample concentrations exceeding the action level would be disposed of at a landfill licensed for such disposal. A plan for disposal of the material would need to be submitted to the Contracting officer and 92 CES/CEAN. If groundwater is encountered, the Contractor would need to cease all operations in the area and immediately notify the Contracting Officer. Sampling, testing, dewatering operations and/or treatment would be addressed as unforeseen site conditions, and if deemed necessary, would be carried out accordingly.

The five hangars in the project area are known to have hazardous building materials, including ACM, LBP, light ballasts, fluorescent light tubes, pad mounted transformers, dry chemical fire extinguishers, Any friable asbestos detected during the detailed asbestos survey and subsequently removed during an abatement action, would be disposed in accordance with permit requirements at a disposal facility that is approved to accept friable asbestos. Loose flakes of lead-based paint would be scraped, collected, and properly disposed at a permitted hazardous waste disposal facility. Dielectric fluid from any transformers or light ballasts suspected of containing PCBs would be tested, and the equipment would be properly disposed as either a regulated waste (PCB content of 50 parts per million [ppm] or more) or as uncontaminated trash (PCB content less than 50 ppm).

The uncontaminated demolition debris, non-friable asbestos and lead-based paint that is still affixed to surfaces would all be disposed of off base at a local construction debris (Class VI) landfill. Class VI landfills are allowed to accept construction and demolition waste, including: non-friable asbestos; lead-based paint that is still affixed to surfaces; and a quantity of 10 PCB-containing light ballasts per structure.

Any thermostats not saved for local reuse would be delivered to the Defense Logistics Agency (DLA), which has an office on Fairchild AFB. DLA would send the thermostats to be recycled, and a waste stream would not be created.

Any asphalt pavements surrounding the structures would be removed, collected, and would be disposed of off-site.

4.8.2 No Action Impacts

Under the No Action Alternative, the opportunity to remove, clean and treat hazardous building materials and shallow contaminated soils would be foregone. Whenever possible, it is advantageous to mitigate hazardous materials. However, these materials are not currently considered a waste, and therefore there are no impacts to waste management.

4.9 SUMMARY OF ENVIRONMENTAL IMPACTS

Table 1. Summary of Environmental Impacts

Issue	Proposed Action	No Action
Air Quality	Temporary demolition-related emissions. Asbestos abatement would be performed wherever indicated. No long term impact	No impact
Water Resources	Short term negative impacts mitigated by SWPPP. Possibility of encountering TCE-contaminated groundwater. Positive long term impact to drainage.	No impact
Geological Resources	No impact	No impact
Cultural Resources	Adverse effect to Historic District; mitigation to take place according to MOA with the SHPO	No impact
Noise	Short term insignificant increase in noise in the project area No long term impact	No impact
Infrastructure/Utilities	Short term outages possible, with at least 7 days advanced warning No long term impact	No impact
Hazardous Materials/ Waste Management	No significant impact	Opportunity to remove hazardous building components foregone

5.0 CUMULATIVE EFFECTS AND IRREVERSIBLE AND IRRETRIEVABLE COMMITMENT OF RESOURCES

5.1 CUMULATIVE EFFECTS

5.1.1 Definition of Cumulative Effects

CEQ regulations stipulate that the cumulative effects analysis within an EA should consider the potential environmental impacts resulting from "the incremental impacts of the action when added to other past, present, and reasonably foreseeable future actions regardless of what agency or person undertakes such other actions" (40 CFR 1508.7). Recent CEQ guidance in *Considering Cumulative Effects* affirms this requirement, stating that the first steps in assessing cumulative effects involve defining the scope of the other actions and their interrelationship with the proposed action and alternatives. The scope must consider geographic and temporal overlaps and must also evaluate the nature of interactions among these actions.

Cumulative effects are most likely to arise when a relationship or synergism exists between a proposed action and alternatives and other actions expected to occur in a similar location or during a similar time period. Actions overlapping with or in close proximity to the proposed action would be expected to have more potential for a relationship than actions that may be geographically separated. Similarly, actions that coincide, even partially, in time would tend to offer a higher potential for cumulative effects.

In this EA, an effort has been made to identify all actions that are being considered and that are in the planning phase at this time. To the extent that details regarding such actions exist and the actions have a potential to interact with the Proposed Action in this EA, these actions are included in this cumulative analysis. This approach enables decision makers to have the most current information available so that they can evaluate the environmental consequences of the Proposed Action.

The potential adverse impacts to resources of interest addressed in this EA are short term and minor; it is anticipated that planned mitigation measures would minimize unforeseen impacts and minimize further those anticipated.

5.1.2 Past, Present, and Proposed Actions Relevant to the Proposed Action and Alternatives

Fairchild AFB is an active military installation that undergoes continuous change in mission and training requirements. The five hangars proposed for demolition are located in the center of an active airfield. Chapter 4 discussed that the Proposed Action itself would not disrupt surrounding flying activities, except with some very minor, short term nuisance effects. There are no past actions with continuing adverse effects that would be relevant to the Proposed Action, or cause cumulative adverse effects. The Proposed Action is expected to occur between fall of 2013 and summer of 2014, but could occur from fall 2012 to summer 2013. The following activities are ongoing or planned in the future at the Installation and share, for some resources, a common ROI with the Proposed Action. No other past or proposed future event has foreseeable effects that are relevant to the project area or its ROI beyond these listed here.

- The repair of pavements in stubs 15-24 on the parking apron, expected to occur 2012-2013
- The repair of pavements of asphalt in Taxiway P, from Taxiway C to Taxiway A, expected to occur 2012-2013
- The repair of pavements in Taxilane J ACC, North of Transient Apron, expected to occur 2012-2013
- The Rightsizing of Taxiway G from Runway to Taxilane J, expected to occur 2012-2013
- The demolition of Warehouses B2001 Bay D, B2009, B2010, and B2011, expected to occur 2012 – Spring 2013

- The demolition of MWR Support Storage, B2248 Bay C, expected to occur 2012 – Spring 2013
- The demolition of SFS Storage Warehouse B2248 Bay D, expected to occur 2012 – Spring 2013

5.1.3 Analysis of Cumulative Effects

The impacts associated with the proposed actions listed in Section 5.1.2 of this EA arise from pavement repairs on the airfield of Fairchild AFB, and the demolition of warehouses on Fairchild AFB.

The impacts of pavement repairs on the runway are expected to be short term impact to air quality in the area surrounding the project sites, as well as to the west (downwind) of the project sites associated with fugitive dust and engine emissions; a minor short-term increase in noise due to construction; occupational safety and health risks of a remote nature; and the handling of hazardous materials and waste. These impacts will be mitigated through construction Best Management Practices including dust control practices, and OSHA requirements, and through required Solid and Hazardous Waste Management Plans. The distance between these projects and the Proposed Action is enough that localized noise and air quality impacts will not accumulate to cause significant adverse impacts.

The impacts of demolitions on the North side of the base are expected to be minor and short-term. The impacts will be similar to those expected for the pavement repairs, as well as a possible impact if there is any petroleum-contaminated soil encountered. These effects will be mitigated through Best management practices as described above. If petroleum-contaminated soil is encountered, it will be mitigated as described in Section 4.8.1. The distance between these projects and the Proposed Action is enough that localized noise and air quality impacts will not accumulate to cause significant adverse impacts.

There are no expected significant impacts associated with cumulative effects related to the Proposed Action.

5.2 UNAVOIDABLE ADVERSE IMPACTS

The significant unavoidable adverse impact that would result from the Proposed Action is the destruction of part of a historic district eligible for nomination into the National Register of Historic Places. The individual properties in and of themselves are not considered eligible to be nominated to the NRHP as historic properties, but they form part of the overall district which is considered eligible. This cultural impact would be mitigated by actions such as the collection of pictures, articles, and/or samples to be kept in historical record, which would be outlined in the Memorandum of Agreement which is being arranged between Fairchild AFB and the State Historic Preservation Office. Thus, the impact would be mitigated and minimized.

No other significant or long-term adverse impacts would be expected under the Proposed Action.

5.3 ENHANCEMENT OF LONG TERM PRODUCTIVITY

Short-term effects would be those associated with the activities during demolition. Under the Proposed Action, 14.4 acres of land would be returned to a natural state, providing land for habitat for creatures such as burrowing animals, to include the possibility of the American badger. The land would also provide more drainage area for water to infiltrate into the groundwater. Thus, the short term, minor impacts of demolition would be outweighed by the positive impact to the productivity of the land. If Fairchild AFB plans, sites, programs, and constructs facilities for current or future missions in this project area, its long term productivity would be converted from a natural habitat to a facility consistent with the land-use that would support the mission of the United States Air Force. If it is a similar facility to

those being demolished, there would be no significant impact to the area. More environmental analysis would need to take place before this could occur.

5.4 IRREVERSIBLE AND IRRETRIEVABLE COMMITMENT OF RESOURCES

NEPA requires that environmental analysis include identification of "...any irreversible and irretrievable commitments of resources; which would be involved in the Proposed Action should it be implemented." Irreversible and irretrievable resource commitments are related to the use of nonrenewable resources and the effects that the uses of these resources have on future generations. Irreversible effects primarily result from the use or destruction of a specific resource (e.g., energy and minerals) that cannot be replaced within a reasonable time frame. Irretrievable resource commitments involve the loss in value of an affected resource that cannot be restored as a result of the action (e.g., extinction of a threatened or endangered species or the disturbance of a cultural site). The use of energy, labor, and fuel for operation of equipment would represent an irretrievable commitment of resources.

For the Proposed Action, most resource commitments are neither irreversible nor irretrievable. The Proposed Action would use gasoline and diesel fuel in vehicles and heavy equipment during construction. None of these activities would be expected to significantly decrease the availability of minerals or petroleum resources.

6.0 REFERENCES

2000. Storm Water Pollution Prevention Plan for Fairchild Air Force Base. 92 CES/CEAN Fairchild Air Force Base, WA.

2001. Hazardous Material Management Plan. Fairchild Air Force Base, WA.

2003. Fairchild Air Force Base Hazardous Waste Management Plan. Fairchild Air Force Base, Washington.

2005. General Plan for Fairchild Air Force Base, Fairchild Air Force Base, Washington.

2005. Integrated Cultural Resources Management Plan. Fairchild Air Force Base, Washington.

2005. Integrated Natural Resources Management Plan for Fairchild Air Force Base, 92 CES/CEAN. Fairchild AFB, Washington.

2005. Integrated Solid Waste Management Plan for Fairchild Air Force Base, 92 CES/CEAN. Fairchild AFB, Washington.

2008. Air Installation Compatible Use Zone (AICUZ) Study for Fairchild Air Force Base, Washington.

2008a. National Ambient Air Quality Standards. http://www.epa.gov/air/criteria.html

2008c. 2002 National Emissions Inventory Data and Documentation. http://www.epa.gov/2002 inventory.html

2010. Base Design Standards. Fairchild Air Force Base, WA.

Adams, D. 2012. Personal Communication. Remedial Project Manager, 92 CES, Fairchild AFB, WA.

Baker, M. 2012. Personal Communication. Real Property Officer, 92 CES, Fairchild AFB. WA.

Council on Environmental Quality (CEQ). 1978. Regulations for Implementing the Procedural Provisions of NEPA. 40 CFR Parts 1500-1508.

Department of Defense (DoD). January 1993. Standard Practice for System Safety, MIL-STD-882C.

Fairchild Air Force Base. 1995. Air Installation Compatible Use Zone (AICUZ) Study, Volumes 1 and 2. Fairchild Air Force Base, WA.

Federal Interagency Committee on Noise. 1992. Federal Agency Review of Selected Airport Noise Analysis Issues. August.

Federal Interagency Committee on Urban Noise. 1980. Guidelines for Considering Noise in Land Use Planning and Control. Washington, DC NIIS PB83-184838.

Klein, Randal and Winn, Kay. Final Environmental Assessment: Proposed Demolition of 12 Structures, Hill Air Force Base, Utah. 22 August 2005.

Luders, D. 2006. Summary graphs of Sanitary Sewer Discharge and Water Use. Fairchild AFB, WA.

Nester, K. 2011. Personal Communication. Chief, Environmental Element, 92 CES, Fairchild AFB, WA.

Paul, L. 2012. Electronic Communication. Programs Flight, 92 CES, Fairchild AFB, WA.

Potter, J. 2012. Personal Communication. Air Quality Manager, 92 CES, Fairchild AFB, WA.

Selser, S. 2012. Personal communication. Natural/Cultural Resource Manager, Fairchild AFB, WA.

Shelton, B. 2012. Personal Communication. Water Resources Manager, 92 CES, Fairchild AFB, WA.

Soil Survey Staff, Natural Resources Conservation Service, United States Department of Agriculture. Web Soil Survey. Available online at http://websoilsurvey.nrcs.usda.gov/. Accessed 1/26/12.

Spokane County Regional Clean Air Agency. 2011. Spokane county air quality monitoring data. http://www.spokanecleanair.org/air_quality_monitoring.asp. Spokane, Washington.

U.S. Census Bureau 2000. "Quick Tables." Tables DP-1 from Summary File 1 and DP-2 and DP-3 from Summary File 3 for State of Washington; Spokane, Washington MSA; and Census Tracts 138,139,104.01, 104.02, and 141. Available online: http://factfinder.census.gov

United States Environmental Protection Agency. August 1974. Information on Levels of Environmental Noise Requisite to Protect Public Health and Welfare With and Adequate Margin of Safety.

United States Environmental Protection Agency Office of Air and Radiation. November 1991. Nonroad Engine and Vehicle Emission Study Report. <http://epa.gov/nonroad/nrstudy.pdf>

Wald, Jonathan. 2012. Personal Communication. Chief, Asset Optimization, 92 CES, Fairchild AFB, WA.

Washington Department of Ecology. 2011. Fairchild Air Force Base 2011 air emissions inventory data.

7.0 LIST OF PREPARERS

Jessica R. Wood, 2d Lt. Deputy Chief, Asset Optimization, Fairchild AFB, Spokane, WA. Years of experience: 5

8.0 LIST OF CONTACTS CONSULTED AND/OR PROVIDED COPIES OF THE EA

The following Fairchild AFB personnel were consulted during the preparation of this Environmental Assessment:

- Kristin Nester, Chief, Environmental Element, 92 Civil Engineering Squadron, Fairchild AFB
- Mary Baker, Real Property Officer, 92 Civil Engineering Squadron, Fairchild AFB
- Bill Shelton , Water Resources Manager, 92 Civil Engineering Squadron, Fairchild AFB
- Steve Selser, Natural Resource Program Manager, 92 Civil Engineering Squadron, Fairchild AFB
- Danielle Adams, Remedial Project Manager, 92 Civil Engineering Squadron, Fairchild AFB
- Joshua Potter, Air Quality Manager, 92 Civil Engineering Squadron, Fairchild AFB
- Lee Paul and Staff, Programs Flight, 92 Civil Engineering Squadron, Fairchild AFB

The following agencies/persons were provided notification or copies of this EA for review and comment:

U.S. Fish and Wildlife Service
Eastern Washington Field Office
11101 East Montgomery Drive
Spokane, Washington 99206

WA State Department of Fish and Wildlife
2315 North Discovery Place
Spokane Valley, WA 99216

WA State Department of Ecology
N. 4601 Monroe
Spokane, WA 99205-3400

State Historic Preservation Office, Suite 106
1063 South Capitol Way
Olympia, WA 98501

A 30 day public review period was provided. A public notice was published on the Fairchild AFB website and made available to the Spokesman Review. The EA was available for public review at the Fairchild AFB Library and electronically, by request.